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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,810	05/12/2006	Akihiko Ueda	Q91902	7403
23373 7590 08/19/2010 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
HU, HENRY S				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
08/19/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/559,810

**Applicant(s)**

UEDA ET AL.

**Examiner**

HENRY S. HU

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2<sup>nd</sup> RCE of June 17, 2010.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 and 6-12 is/are pending in the application.  
4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 3 and 9-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☒ Claim(s) 1, 3 and 6-12 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/06)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☒ Other: Library search of 8-10-2010

### DETAILED ACTION

1. USPTO has received **two** things including: (A) **2<sup>nd</sup> RCE** Request filed on June 17, 2010 and (B) **Amendment (after Final)** filed on May 19, 2010, which is in response to Final office action (for 1<sup>st</sup> RCE) filed on February 19, 2010. With such an amendment, **Claims 1 and 12 are amended; Claims 2 and 4-5 are previously cancelled, non-elected Claims 6-8 are still withdrawn, Claims 2 and 5 are cancelled, while no new claim is added.** To be more specific, each of two parent claims including **Claim 1 and Claim 12** is amended to delete **fluorine** from the definition of monovalent group X to be in formula (I) of repeating unit (A). To be specific, X is now only related to a chlorine atom. **The scope of parent Claims 1 and 12 is each certainly further changed.**

**Claims 1, 3 and 6-12** with **two** independent claims (**Claim 1 and Claim 12**) are now pending, while non-elected Group II (Claim 6) and Group III (Claims 7 and 8) are still both withdrawn from consideration. An action follows.

### Response to Argument

2. Applicant's arguments filed on May 19, 2010 have been fully considered but they are not persuasive. The focal arguments related to the patentability will be addressed as follows: **Two parent claims are involved.** Parent **Claims 1 and 12** is each amended to delete **fluorine** from the definition of monovalent group X to be in formula (I) of repeating unit (A). To be specific,

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X is now only related to a chlorine atom. **The scope of parent Claims 1 and 12 is each certainly further changed.**

After further search particularly on the issue of X being only a **chlorine** atom, previous 102(b) rejection by Ohmori is modified to pure 103(a) rejection with the teaching from Kubo and/or Inukai. **Non-Final rejection is thereby applied** for this 2<sup>nd</sup> RCE with current situation. Further amendment on parent Claims 1 and 12 is suggested.

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. The limitation of “once-amended” parent **Claim 1** in present invention relates to a **fluorine-containing polymer for a masonry treatment**, comprising three monomers including:

(A) a fluorine-containing monomer having a formula (I)  $R_f-Y-O-C(=O)-CX=CH_2$  with all the three factors X, Y and  $R_f$  as specified, particularly X is now amended to be a fluorine atom or a chlorine atom,

(B) a monomer containing a functional group reactive with active hydrogen, wherein the functional group is a silane group, and

(C) a fluorine-free alkyl group-containing monomer which is alkyl (meth)acrylate.

**Newly added** parent **Claim 12** relates to parent Claim 1 but uses a closed language “consisting of” for the monomeric composition of the copolymer.

*See other limitation of dependent **Claims 3 and 9-11**.*

5. **Claims 1, 3 and 9-12 are rejected** under 35 U.S.C. 103(a) as being unpatentable over **Ohmori et al. (EP 247,489 A2** or its equivalent **US 5,021,501**) in view of **Kubo et al. (US 5,071,725** or its equivalent **US 5,021,316**) and/or **Inukai et al. (EP 327,906 A1** or its equivalent **US 5,128,389**) for the reasons set forth in paragraphs **5-8** of office action dated 5-26-2009 and paragraphs **5-10** of office action dated 2-19-2010 as well as the discussion below.

6. **Two parent claims are now involved.** Parent **Claims 1 and 12** is each amended **to delete fluorine** from the definition of monovalent group X to be in formula (I) of repeating unit (A). To be specific, X is now only related to a chlorine atom. **The scope of parent Claims 1 and 12 is each certainly further changed.**

7. Parent Claims 1 and 12 is each related to a fluorine-containing copolymer (to be useful for a masonry treatment) comprising (or consisting of) three monomers including: (A) a fluorine-containing monomer having a formula (I)  $R-Y-O-C(=O)-CX=CH_2$ , wherein X is now amended to be a chlorine atom only (fluorine is now excluded), (B) a monomer containing a **functional** group reactive with active hydrogen, wherein the functional group is now a silane group, and (C) a fluorine-free alkyl group-containing monomer which is alkyl (meth)acrylate. Based on the fact that at least three monomers are now applied in making the copolymer, the scope of parent Claim 1 is certainly changed.

8. The previous 102(b) rejection over **Ohmori** set forth above for Claims 1, 3 and 9-12 is incorporated here by reference. Regarding two parent Claims 1 and 12, **Ohmori** is “only” silent about using the specified repeating unit A with monovalent group X to be chlorine atom only. Two references including **Kubo and Inukai** in combination or alone can teach such a subject matter.

9. To be specific, **Kubo and Inukai** in combination or alone has taught that functional equivalence and interchangeability are indeed existed between the “exact” repeating units A (a fluoroalkyl acrylate) with monovalent group X to be chlorine atom or fluorine atom in the course of making fluorinated copolymer particularly for the same coating purpose as instant application.

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10. To be specific, see **Kubo** at column 2, line 37-65; particularly see R<sub>1</sub> in **formula (e)** can be either a fluorine atom or a chlorine atom at line 50-51; see the coating application at abstract, line 1-5. See **Inukai** at page 3, line 31-44; particularly see R<sub>3</sub> in **formula (II)** can be either a fluorine atom or a chlorine atom at line 43; see the coating application at abstract, line 1-6.

11. In light of the fact that all involving references are dealing with making fluorinated copolymers comprising fundamentally the same co-monomers as well as they are for the same or at least similar coating application on substrate, one having ordinary skill in the art would therefore have found it obvious to modify **Ohmori**'s process of making copolymers by replacing and/or further including the above-mentioned chlorine-analogue monomer as taught by a **combination of Kubo and Inukai** based on the fact that **functional equivalence and interchangeability are indeed existed** between the two species monomers. Accordingly, better and more efficient fluorinated copolymers may be thereby obtained.

12. In summary, after further search particularly on the issue of X being only a **chlorine** atom, previous 102(b) rejection by Ohmori is modified to pure 103(a) rejection with the teaching from Kubo and/or Inukai. **Non-Final rejection is thereby applied** for this 2<sup>nd</sup> RCE with current situation. Further amendment on parent Claims 1 and 12 is suggested.

### ***Conclusion***

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13. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu whose telephone number is (571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Vasu Jagannathan, can be reached on (571) 272-1119. The **fax** number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D. Mulcahy/  
Primary Examiner, Art Unit 1796

/Henry S. Hu/  
Examiner, Art Unit 1796

August 13, 2010